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AMINES SUBSTITUTED WITH A DIHYDRONAPHTHALENYL,
CHROMENYL, OR THIOCHROMENYL GROUP, A PYRIDYL GROUP AND
AN ALKYL GROUP, HAVING RETINOID-LIKE BIOLOGICAL ACTIVITY

BACKGROUND OF THE INVENTION

Cross-reference to related application:

The present application is a divisional of application serial number 09/533,680, filed on March 23, 2000, now United States Patent No. 6,613,917.

1. Field of the Invention

The present invention relates to novel compounds having retinoid-like biological activity. More specifically, the present invention relates to amines substituted with a dihydronaphthalenyl, chromenyl, or thiochromenyl group, an aryl or heteroaryl group and an alkyl group, which have retinoid-like, retinoid antagonist or retinoid inverse agonist-like biological activity.

2. Background Art

Compounds which have retinoid-like activity are well known in the art, and are described in numerous United States and other patents and in scientific publications. It is generally known and accepted in the art that retinoid-like activity is useful for treating animals of the mammalian species, including humans, for curing or alleviating the symptoms and conditions of numerous diseases and conditions. In other words, it is generally accepted in the art that pharmaceutical compositions having a retinoid-like compound or compounds as the active ingredient are useful as regulators of cell proliferation and differentiation, and particularly as agents for treating skin-related diseases, including, actinic keratoses, arsenic keratoses, inflammatory and non-inflammatory acne, psoriasis, ichthyoses and other keratinization and hyperproliferative disorders of the skin, eczema, atopic dermatitis, Darriers disease, lichen planus, prevention and reversal of glucocorticoid damage (steroid atrophy), as a topical anti-microbial, as skin anti-pigmentation agents and to treat and reverse the effects of age and photo damage to the skin. Retinoid compounds are also useful for the prevention